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EXAMINER	
SKORUPA, VALERIE LYNN	
ART UNIT	PAPER NUMBER
3771	

MAIL DATE	DELIVERY MODE
01/27/2012	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,605	EINAV, OMER	
	Examiner	Art Unit	
	VALERIE L. SKORUPA	3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-45* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-45* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☒ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *28 March 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/18/2012, 1/2/2012, 12/27/2011, 12/19/2011, 12/6/2011, 11/29/2011, 11/8/2011, 11/1/2011, 10/24/2011, 10/11/2011*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed November 29, 2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the Non-Patent Literature Cite No. 76 is missing a date. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Specification

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (see, Specification, page 2, lines 2, 19, 22, 24, and 28). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

5. Claim 9 recites the limitation "said rotating" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-5, 9, 15, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Nashner (US Patent No. 5,269,318).**

8. As to claim 1, Nashner discloses a rehabilitation chair system (Fig. 1) comprising: a seat 11, 11' adapted for sitting of a human thereon (see especially Fig. 13C, 13D in which a user is shown sitting on platform 11 and col. 4, ln. 52-55); at least one extender 15, 15', 19 adapted to move relative to said seat 11, 11'; at least one sensor 13, 17 which generates an indication of a balance state of said human; and a controller 14

configured to move said extender while measuring said balance state using said at least one sensor (col. 8, ln. 23-42).

9. As to claim 2, Nashner discloses that said extender 15, 15' is mechanically coupled to said seat 11, 11' (see Fig. 1).

10. As to claim 3, Nashner discloses that the controller 14 moves said extender responsive to said balance state (col. 8, ln. 65 - col. 9, ln. 4).

11. As to claim 4, Nashner discloses that the controller 14 moves the extender 15, 15', 19 and measures a responsive change in balance state (col. 8, ln. 23-42).

12. As to claim 5, Nashner discloses that the seat 11, 11' is adapted to rotate out of place of the seat (col. 8, ln. 53-55).

13. As to claim 9, Nashner discloses that the seat 11, 11' is adapted to resist said rotating thereof (there will be at least some inherent resistance to rotation of the seat).

14. As to claim 15, Nashner discloses that the at least one balance sensor comprises at least one pressure mat 13 for a foot of the human (col. 8, ln. 29-31).

15. As to claims 21 and 22, Nashner discloses that the controller drives said extender 15, 15', 19 and said seat 11, 11' according to a rehabilitation plan stored within the controller (col. 8, ln. 36-42).

16. **Claims 1 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Neis (US Patent No. 3,745,990).**

17. As to claim 1, Neis discloses a rehabilitation chair system (Fig. 1, Fig. 2) comprising: a seat 20, adapted for sitting of a human thereon; at least one extender 28, 30, 46, 50 adapted to move relative to said seat 20; at least one sensor which

generates an indication of a balance state of said human (col. 5, ln. 3-20); and a controller configured to move said extender while measuring said balance state using said at least one sensor (col. 1, ln. 42-46).

18. As to claim 16, Neis discloses that the sensor comprises at least one pressure sensor for an armrest 28, 30 of said chair (col. 5, ln. 3-9).

19. **Claim 23 is rejected under 35 U.S.C. 102(a) as being anticipated by Bardon et al (US Patent No. 6,558,304).**

20. Bardon discloses a rehabilitation system (Fig. 1, Fig. 2) comprising a joint 7 (Fig. 6, Fig. 7) having a common center of rotation for rotation and elevation angles (see arrows in Fig. 1, Fig. 2); a seat 2 mounted on said joint 7 (col. 7, ln. 47-63 describes the embodiment where the user is in the seated position on a seat instead of standing on the foot platform); and a controller 14 adapted to drive said seat 2 (col. 5, ln. 46-51).

21. **Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Boyd et al (US Patent No. 4,691,694).**

22. Boyd discloses a rehabilitation system (Fig. 1) comprising: a chair 50 adapted for sitting of a human thereon; a leg lift mechanism 12 adapted to lift at least one leg of a human sitting on the chair 50; and a controller 36 adapted to control the lift mechanism 12 to repeatedly lift the at least one leg of the human, such that the spine of the human is manipulated (col. 23, ln. 29-31).

23. **Claims 25, 26, 28, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Donovan et al (US Patent No. 5,179,939).**

24. As to claim 25, Donovan discloses a method of rehabilitation of a person comprising sitting a person in a chair 28 (Fig. 5) coupled to a robotic assistance device 20; and performing, with robotic assistance of said device 20, at least one rehabilitation exercise on said person, said exercise designed to rehabilitate balance, said robotic assistance including providing motive force by said robotic assistance (col. 3, ln. 44-52).

25. As to claim 26, 28, and 38, Donovan discloses that the exercise comprises reaching one or more hands, a manipulation of hands extended away from the body, or moving a body part (col. 3, ln. 44-52).

26. **Claims 25-29, 38 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Hogan et al (US Patent No. 5,466,213).**

27. As to claim 25, Hogan discloses a method of rehabilitation of a person comprising sitting a person in a chair (see Fig. 11a) coupled to a robotic assistance device 10; and performing, with robotic assistance of said device, at least one rehabilitation exercise on said person, said exercise designed to rehabilitate balance, said robotic assistance including providing motive force by said robotic assistance (col. 3, ln. 17-31).

28. As to claims 26-29, Hogan discloses that said exercise comprises reaching one or more hands, lifting and placing an object, a manipulation of hands extending away from the body (col. 1, ln. 45-56), or an interactive exercise with feedback as the complexity of the exercise increases (col. 4, ln. 4-11).

29. As to claims 38 and 39, Hogan discloses that said robotic assistance comprises moving a body part and resisting the motion of a body part (col. 3, ln. 64 - col. 4, ln. 7).

30. **Claims 25, 30-37, 40, and 44 are rejected under 35 U.S.C. 102(a) as being anticipated by Abraham-Fuchs et al (US Patent No. 6,682,351).**

31. As to claim 25, Abraham-Fuchs discloses a method of rehabilitation of a person comprising sitting a person in a chair 12 (Fig. 1) coupled to a robotic assistance device 9; and performing, with robotic assistance of said device, at least one rehabilitation exercise on said person, said exercise designed to rehabilitate balance, said robotic assistance including providing an obstruction to motion by said robotic assistance (col. 4, ln. 39-52).

32. As to claims 30 and 31, Abraham-Fuchs discloses monitoring a plurality of body parts or monitoring a balance between body sides of the person while performing the exercise (col. 3, ln. 36-42).

33. As to claim 32-37, Abraham-Fuchs discloses monitoring positions of an organ of the person and analyzing the positions to determine an assistance of the organ to a balance of the person (col. 3, ln. 24-35) wherein the organ comprises an arm, a torso, or a leg (Fig. 1, col. 3, ln. 4-13).

34. As to claim 40, Abraham-Fuchs discloses that said robotic assistance comprises preventing a loss of balance (col. 4, ln. 39-51).

35. As to claim 44, Abraham-Fuchs discloses that said exercise comprises torso training (rowing machine 9).

36. **Claims 25 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitaker (US Patent No. 3,824,991).**

37. Whitaker discloses a method of rehabilitation of a person comprising sitting a person in a chair 11 (Fig. 1, Fig. 2) coupled to a robotic assistance device 12; and performing, with robotic assistance of said device 12, at least one rehabilitation exercise on said person, said exercise designed to rehabilitate balance, said robotic assistance including providing motive force by said robotic assistance, wherein said robotic assistance comprises inducing loss of balance (col. 1, ln. 51-64).

38. **Claims 25, 42, and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Andolfi (US Patent No. 5,411,044).**

39. Andolfi discloses a method of rehabilitation of a person comprising sitting a person in a chair (see Fig. 2) coupled to a robotic assistance device (Fig. 1); and performing, with robotic assistance of said device, at least one rehabilitation exercise on said person, said exercise designed to rehabilitate balance, said robotic assistance including providing motive force by said robotic assistance, wherein said exercise comprises standing up and said robotic assistance lifts said person (col. 8, ln. 14-23).

40. **Claim 45 is rejected under 35 U.S.C. 102(b) as being anticipated by Lancaster et al (US Patent No. 5,311,880).**

41. Lancaster discloses a method of balance rehabilitation comprising performing by a person a task requiring balancing and monitoring a performance of said task by measuring forces at a plurality of spatially separated load areas on which the person applies force, including at least one load area other than a foot (col. 6, ln. 31-42).

Claim Rejections - 35 USC § 103

42. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

43. **Claims 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neis, in view of Grellas (US Patent No. 5,158,074).**

44. Neis discloses the claimed invention except that the seat comprises a back that is articulated and rotates around a vertical axis thereof or that the seat is adapted to lift under power at least 10 cm. However, Grellas teaches a seat 10 (Fig. 1) which comprises a back 14 that is articulated and rotates around a vertical axis and lifts under power (col. 5, ln. 23-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Neis to include the articulated, rotating seat back and allow the seat to lift under power as taught by Grellas in order to provide a means for adjusting the position of the user to increase comfort and adjust for different sized users. The modified system of Neis lacks detailed description as to the limitation that the seat lifts at least 10 cm. However, the amount of lift of the chair is a matter of design consideration and is would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Neis so that he chair lifts at least 10 cm in order to accommodate a range of users of different heights since it appears that Neis' system would perform equally well with a lift range of at least 10 cm.

45. **Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nashner, in view of Palarski (US Patent No. 4,966,413).**

46. Nashner discloses the claimed invention, except for a first and second leg mover adapted to lift a first and second leg from the floor wherein the leg movers are adapted to be locked together or separately moveable. However, Palarski teaches a chair system (Fig. 4, Fig. 5) which includes leg movers 15R, 15L that are separately movable (col. 6, ln. 51-55) and can be locked together (see Fig. 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Nashner to include the leg movers as taught by Palarski in order to provide a means to position the legs of the user when sitting to provide comfort and control over the position of the user since it appears that Nahsner's system would perform equally well with leg movers.

47. **Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nashner, in view of Ashton (US Patent No. 5,358,251).**

48. Nashner discloses the claimed invention including that the at least one sensor is positioned on the seat 11, 11' for a buttock (see Fig. 1, Fig. 13C, 13D) and comprises at least two sensors symmetrically positioned relative to a person sitting in the chair under each support surface 11 and 11' (Fig. 1, col. 8, ln. 29-30), but does not disclose that the sensors are pressure sensors (instead Nashner discloses them as force sensors). However, Ashton teaches a pressure sensor 27 to indicate a balance state of the user (col. 3, ln. 16-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Nashner to include the

pressure sensor in place of the force sensor as taught by Ashton in order to provide a suitable alternative means for measuring a balance state (weight distribution) of the user since it appears that Nashner's system would perform equally well with the pressure sensors in place of the force sensors.

49. **Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nashner ('318), in view of Nashner (US Patent No. 5,476,103), and further in view of Ashton.**

50. Nashner ('318) discloses the claimed invention except that the sensor comprises a pressure sensor positioned to be placed on a table near said chair. However, Nashner ('103) teaches placing a sensor 145 on a table 11 near a support surface 12 (see Fig. 14, col. 11, ln. 60 - col. 12, ln. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Nashner ('318) to include a sensor placed on a table near said chair as taught by Nashner ('103) in order to provide a means for measuring a balance state during sitting or standing movements of a user. Furthermore, Ashton teaches a pressure sensor 27 to indicate a balance state of the user (col. 3, ln. 16-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Nashner ('318) to include the pressure sensor in place of the force sensor in order to provide a suitable alternative means for measuring a balance state (weight distribution) of the user since it appears that Nashner's system would perform equally well with the pressure sensor in place of the force sensor.

51. **Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nashner ('318), in view of Atlas et al (US Patent No. 6,852,086).**

52. Nashner discloses the claimed invention except that the at least one sensor comprises at least four spatially separated pressure sensors. However, Atlas teaches at least four spatially separated pressure sensors 44 (Fig. 1) to measure a balance state of a user (col. 6, ln. 48-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Nashner to include the at least four spatially separated pressure sensors as taught by Atlas in order to provide an alternative means of measuring a balance state of the user since it appears that Nashner's system would perform equally well with the at least four pressure sensors in place of the force sensors to measure the weight distribution of the user.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VALERIE L. SKORUPA whose telephone number is (571)270-1479. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571)272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VALERIE L SKORUPA/
Examiner, Art Unit 3771

/Justine R Yu/
Supervisory Patent Examiner, Art Unit 3771